



Wisconsin DNR Fisheries Information Sheet



Stream: North Branch Pike River **County:** Marinette

Year: 2018

Regulation: Red

Size Limit: Brook trout – 8 inches
Brown trout – 12 inches

Daily Limit: 3

The North and South Branches of the Pike River join near Amberg to form the Pike River. The watershed is primarily forested with limited agricultural activity. The Pike River has a total river length of 30 miles, a surface area of 135.2 acres and an average width of 38 feet. A total of 14 waterfalls and rapids are present. In 1965, the Wisconsin Legislature designated the Pike River system in Marinette County as a State Wild River. Since that time there has been a continued effort to acquire land adjacent to the Pike River to preserve the natural scenic beauty of the stream corridor.

Brook, brown and rainbow trout were regularly stocked in the North Branch Pike River from 1943 through the 1960's. Stocking was discontinued in 1972 after fish surveys in 1969 and 1970 classified the North Branch as a Class 1 trout stream. Since that time, brook and brown trout populations have maintained the fishery through natural reproduction.

There are many road crossings that serve as access points to the North Branch Pike River. Anglers often access the River at Pike River Drive, CCC Camp Road, Cty A, Twin Lake Road, Lily Lake Road, Smeester School Road, Town Corner Lake Road, and Benson Lake Road. Several walk-in access points, with parking along Twelve Foot Falls Road are also available. Parking and camping are also available at Twelve Foot Falls County Park. Additionally, over 20 miles of public river frontage is owned by the Department of Natural Resources at various locations. A map of detailing these public areas can be found at: <http://dnr.wi.gov/maps/WR/NOR/1955pikerivernorthbranch.pdf>

The North Branch Pike River was surveyed on August 13 and 14, 2018 to assess the brook and brown trout fisheries. A 0.32-mile section of the river was sampled downstream of the bridge crossing on Pike River Drive in the Town of Goodman (T37N - R18E S33) and a 0.38-mile station was sampled upstream of the bridge crossing on Town Corner Lake Road in the Town of Beecher (T36N - R20E S33). All brook and brown trout collected were measure to the nearest 0.1 inch total length and weighed before being released.

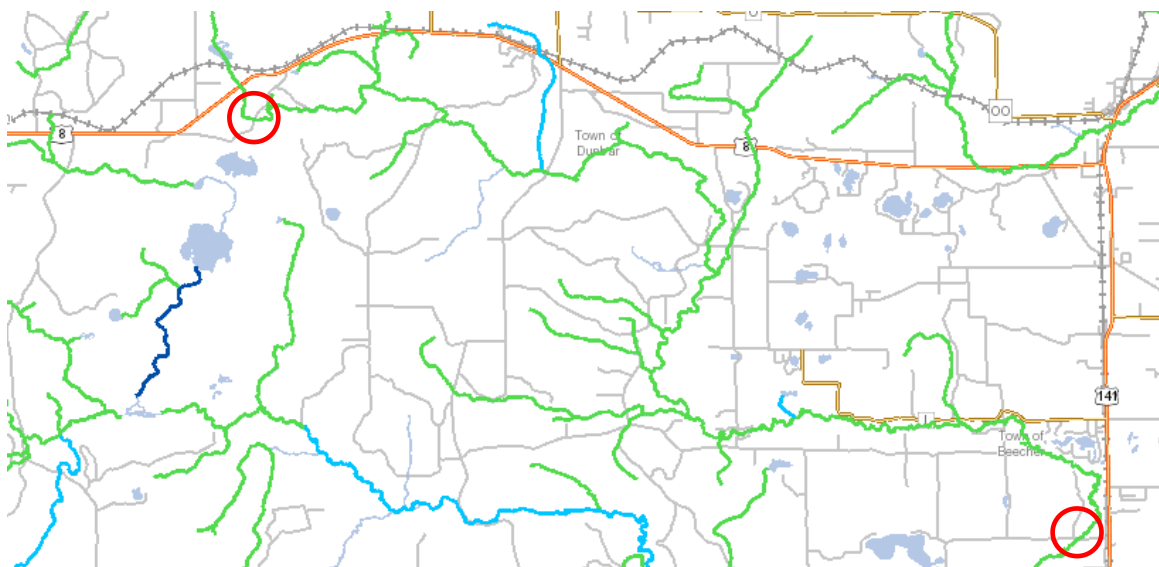


Figure 1. Sampling locations (red circles) on the North Branch Pike River in Marinette County, WI. Catch per Unit Effort (CPUE) and Length Frequency

CPUE is a relative abundance index which is often directly related to absolute abundance. Trout fisheries are routinely quantified using CPUE or the number and/or size of trout per mile. CPUE's can be used to compare streams by ecoregion or statewide. This is done by using percentiles (PCTL). For example, if a CPUE is in the 90th PCTL, CPUE is greater than 90% of the CPUE's in that ecoregion or across the state. CPUE percentiles may also be used to categorize trout abundance; 33rd (low abundance), 66th (moderate abundance), 90th (high abundance), and 95th (very high abundance).

The length frequency of trout describes the size structure of the sample or population and is the number of fish captured per 1-inch length group.

BROOK TROUT

A total of 70 brook trout was collected in the North Branch Pike River in 2018 (Figure 2). Brook trout ranged in length from 2.4 to 13.0 inches and averaged 5.3 inches (Table 1). The number of brook trout collected increased between 2016 and 2018 (Figure 2, Table 1). The average length of brook trout decreased slightly between 2016 and 2018 from 5.6 to 5.3 inches, respectively (Table 1). Eleven young-of-the-year (YOY)/mile were collected in 2016 compared to 37 YOY/mile in 2018 (Table 1). Only 3 brook trout greater than the 8-inch minimum length limit (MLL) were collected in both 2016 and 2018 (Figure 2).

Even though total brook trout CPUE improved between 2016 and 2018, the overall trend of total CPUE has been decreasing since 2010 (Figure 3, Table 1). Similarly, brook trout CPUE \geq 8 inches has been relatively constant (Figure 3). Brook trout CPUE \geq 8 inches remained unchanged between 2016 and 2018 and is currently around the 40th PCTL compared to other streams in the Northern Lakes and Forests ecoregion (Table 1). The

improvement in total CPUE in 2018 can be attributed to the large number of YOY collected (Figure 2, Table 1).

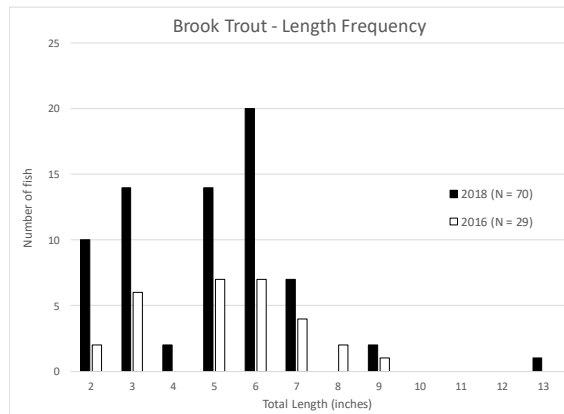


Figure 2. Length frequency of all brook trout collected 2016 and 2018.

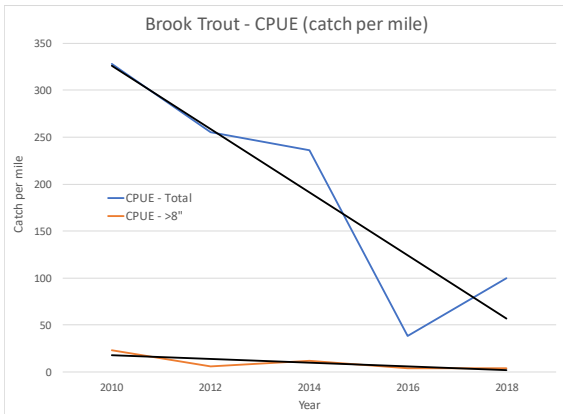


Figure 3. Total CPUE and CPUE of 8" brook trout collected from 2010 through 2018.

Table 1. Brook trout catch per unit effort (CPUE) and percentile (PCTL) by various length groups from 2010 through 2018 in the North Branch Pike River.

Year	Average Length (in)	Length Range	Number Collected	CPUE = catch per mile (PCTL - percentile)					
				Total (PCTL)	YOY	> 5" (PCTL)	> 8" (PCTL)	> 10" (PCTL)	> 12" (PCTL)
2010	5.7	2.2 - 11.8	210	328 (60)	91	238 (75)	23 (65)	3 (75)	0
2012	4.8	2.1 - 10.7	163	255 (55)	123	131 (55)	6 (45)	2 (75)	0
2014	4.8	2.1 - 10.1	179	236 (50)	122	113 (50)	12 (55)	3 (75)	0
2016	5.6	2.7 - 9.3	29	38 (20)	11	28 (25)	4 (40)	0	0
2018	5.3	2.4 - 13.0	70	100 (35)	37	63 (40)	4 (40)	1 (70)	1 (90)

BROWN TROUT

A total of 51 brown trout was collected in the North Branch Pike River (Figure 4). Brown trout ranged in length from 2.7 to 13.2 inches and averaged 5.9 inches (Table 2). The number of brown trout collected increased between 2016 and 2018 (Figure 4, Table 2). The average length of brown trout decreased slightly from 6.0 inches in 2016 to 5.9 inches in 2018.

Even though total brown trout CPUE increased between 2016 and 2018, the overall trend of total CPUE has been decreasing since 2010 (Figure 5). The increase in total brown trout CPUE between 2016 and 2018 can be attributed to the number YOY collected in 2018 (Figure 4 and Table 2). Nine YOY/mile were collected in 2016 compared to 29 YOY/mile in 2018 (Table 2). Brown trout CPUE \geq 12 inches remained consistently low since 2014 (Figure 5, Table 2). Only 1 brown trout over the 12-inch MLL has been collected since 2014.

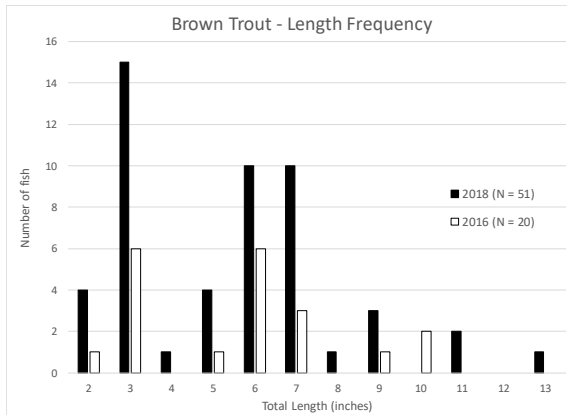


Figure 4. Length frequency of all brown trout collected in 2016 and 2018.

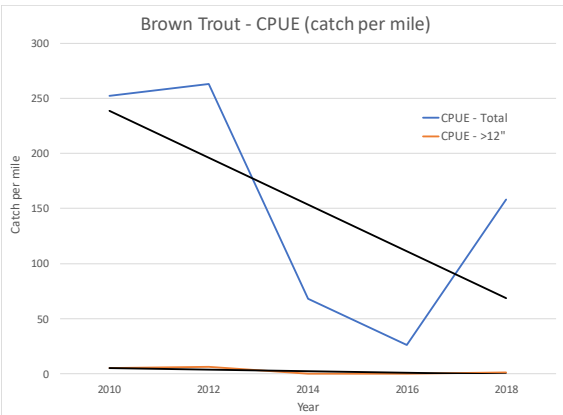


Figure 5. Total CPUE and CPUE of 12" brown trout collected from 2010 through 2018.

Table 2. Brown trout catch per unit effort (CPUE) and percentile (PCTL) by various length groups from 2010 through 2018 in the North Branch Pike River.

Year	Average Length (in)	Length Range	Number Collected	CPUE = catch per mile (PCTL - percentile)						
				Total (PCTL)	YOY	> 5" (PCTL)	> 8" (PCTL)	> 10" (PCTL)	> 12" (PCTL)	> 15" (PCTL)
2010	5.3	2.6 - 12.4	161	252 (71)	120	131 (74)	19 (61)	6 (56)	5 (67)	0
2012	5.3	2.0 - 16.9	168	263 (71)	152	111 (71)	39 (76)	27 (81)	6 (70)	2 (77)
2014	4.8	2.4 - 11.0	52	68 (51)	32	37 (50)	1 (29)	1 (46)	0	0
2016	6.0	2.6 - 10.3	20	26 (34)	9	17 (34)	4 (36)	3 (50)	0	0
2018	5.9	2.7 - 13.2	51	158 (64)	29	44 (53)	10 (49)	4 (53)	1 (60)	0

DISCUSSION

The North Branch Pike River is capable of supporting trout populations however, our trend site surveys suggest that both brook and brown trout populations are declining. Even though reproduction and recruitment of both brook and brown trout has been consistently documented, catch rates at all sizes and the lack of harvestable sized fish is troubling.

Two impoundments (North Pond & Railroad Pond) upstream of our sampling site on Pike River Drive likely influence water temperature at this sampling location. However, previous survey results do not suggest this to be a limiting factor in terms of trout abundance. In both 2016, water levels were extremely low which likely affected the abundance and distribution of trout below Pike River Drive. Water levels were improved in 2018 but trout abundance was still low.

CONCLUSIONS & RECOMMENDATIONS

New inland trout regulations were implemented during the 2016-2017 fishing season. The current fishing regulation (2018) for the North Branch Pike River is an 8-inch MLL for brook trout and a 12-inch MLL for brown trout. The daily bag limit is 3 trout total.

Trout surveys should be expanded on the North Branch Pike River in 2020, including the 2 stations summarized in this report. If brook and brown trout total CPUE, CPUE >8" for brook trout and CPUE >12" for brown trout do not improve to levels observed in 2012 (Tables 2 and 3), then a fishing regulation change may be justified for portions, or the entire length, of the North Branch Pike River.

The general open season for inland trout streams is from the first Saturday in May at 5:00 A.M. through October 15 except as listed in the specific waters listed by county. Anglers are encouraged to obtain and review a current copy of the trout fishing regulations before fishing these areas. The trout fishing regulations can be downloaded from the DNR's website at: <http://dnr.wi.gov/topic/fishing/regulations/TroutRegs.html>
Questions regarding fisheries management activities for the North Branch Pike River:

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